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Measuring Life-long Learning in the Malaysian Institute of Higher Learning Context

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Abstract

The world around us is constantly changing, evolving, and most belief that it is changing in an unprecedented speed caused by globalization. As part of this ever changing society, we must also be able to adapt and learn new skills to keep up with these changes. Therefore, modern universities can no longer be contented in imparting well established and current knowledge and skills to their students, but must be able to equip students with the generic skills and ability to guide their own learning as throughout their lives and in the wide variety of situations they will encounter after leaving formal education. This paper described effective life-long learners as having the ability to 1) set goals, 2) apply appropriate knowledge and skills, 3) engage in self-direction, 4) locate required information, and 5) adapt their learning strategies to different conditions. However, measuring life-long learning is as difficult as defining life-long learning. There are not many instrument able to measure life-long learning in the construct mentioned earlier, although there are instruments measuring parts of the constructs, for example self-directed learning and need for cognition. This paper aims to explore the validity and reliability of this questionnaire in the Malaysian context.

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1. Introduction

In this ever changing society, the Institution of higher learning must be able to train individuals who are able to learn and adapt once they join the working world. Therefore, it is important that institutions of higher learning be able to train their graduates to be lifelong learners. This is especially relevant for developing countries, whereby we are still chasing to be at par with the developed world in all areas, from science and technology to our mentality.

There is a large amount of literature and history behind the construct and rational of lifelong learning. The “birth” of lifelong learning is from Learning to be, written by Edgar Faure for UNESCO (Faure, 1972). The concept lifelong learning, as adopted by UNESCO, view learning as an inevitable human activity from birth till old age. Therefore, learning opportunities must be made available to all population demographics. Further, lifelong leaning

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does not necessarily mean going back to school after graduation, but rather that an individual can continue to learn in a wide variety of setting (i.e. in the workplace).

To better understand lifelong learning, it is essential to be able to measure its characteristics. However, it is extremely difficult to measure something that broad. However, attempts have been made to measure lifelong learning or its related constructs (Cacioppa & Petty, 1984; Deakin Crick et al., 2004; Kirby et al., 2010). Cacioppa and Petty (1984) only measure one characteristics of lifelong learning, and that is need of cognition. Need for cognition refers to an individual's tendency to engage in and enjoy effortful cognitive endeavours (Cacioppa & Petty, 1984), and is closely related to characteristics of a lifelong learner. Deakin Crick et al., (2004) attempted to measure lifelong learning as a whole through a 75-item long questionnaire (the Effective Lifelong Learning Inventory, ELLI). ELLI measures seven domains, changing and learning, critical curiosity, meaning making, dependence and fragility, creativity, learning relationship, and strategic awareness (Deakin Crick & Yu, 2008; Deakin Crick et al., 2004). However, the ELLI is very extensive and broad. Further, ELLI is developed measure lifelong learning constructs mainly in school going children and not among university students. Lastly, Kirby et al (2010) have developed a brief (14-items) lifelong learning questionnaire that is specifically designed for use in the institutes of higher learning. Therefore, we have adopted Kirby et al., (2010) lifelong learning questionnaire to measure lifelong learning among Malaysian university students.

Instruments measuring psychosocial variability are validated within a limited setting, and usually within a population. This validation does not apply outside of those parameters, or if the said instrument is changed in any way. The lifelong learning questionnaire developed and validated by Kirby et al., (2010) was originally in English and tested on university students in the US. The aim of this paper is to test the reliability and validity of the lifelong learning questionnaire in the Malaysian context.

2. Methodology

2.1 Participants

This is a pilot study to test the validity and reliability of the Life-Long Learning Questionnaire developed by Kirby et al., (2010) in the Malaysian context. The pilot study was conducted in The National University of Malaysia (Universiti Kebangsaan Malaysia, UKM). Third year student from the Faculty of Education were invited to participate in this pilot study.

2.2 Measures

The Lifelong Learning questionnaire (Kirby et al., 2010) was translated into Bahasa Malaysia, the National Language of Malaysia and the academic language at the Faculty of Education in UKM. The translation was completed by an academic well verse in the area of lifelong learning and checked by a group of faculty members well versed in the same area. During the translation process, emphasis was on ensuring that the original meaning if the questions were retained. The translated lifelong learning questionnaire was then administered to the participants. The lifelong questionnaire consists of 14 items measuring five characteristics of lifelong learners identified by Knapper and Cropley (2000). Participants were required to respond in a five-point Likert scale, ranging from -2 (strongly disagree) to +2 (strongly agree).

2.3 Procedure

The students completed the paper survey after a mass lecture of a compulsory course for all third year students at the Faculty of Education.

2.4 Statistical Analysis

Descriptive statistics were conducted to describe the sample. Cronbach's Alpha was calculated for the translated lifelong learning questionnaire to test the internal reliability of the questionnaire while factor analysis was conducted

to test the factor validity of the questionnaire. T-test and one-way ANOVA was used to explore if demographic differences yield different results using the translated lifelong learning questionnaire.

3. Results

A total of 69 completed questionnaires were returned. However, after excluding questionnaire with missing data in the lifelong learning questionnaire, 65 were included for analysis. Table 1 shows the characteristics of the participants in this study. Overall, there are more female respondents (70.8%) compared to male respondents (24.6%). This reflects the demographics of registered students at the Faculty. Cronbach's Alpha for lifelong learning questionnaire was relatively low ($\alpha = 0.597$) with a mean of 0.47 ± 0.64 . Item means ranged from -0.59 to 1.17 (on the -2 to +2 Likert scale) and standard deviations ranged from 0.68 to 1.19. This resulted shows the ability of the translated questionnaire to measure variability, with our sample not showing a strong tendency towards lifelong learning.

Table 2 shows the relation between specific questions and lifelong learning construct and the mean and standard deviation for each item. For easy reading, the items are groups according to the construct it measures and not according to the sequence in the questionnaire. Apart from questions measuring the characteristic of application of knowledge and skills (items 5, 10 and 12) and locating information (item 11) showing a consistent tendency of lifelong learning (all showing a positive tendency towards lifelong learning), all other characteristics (goal setting, self-direction & evaluation, adaptable learning strategies) have items showing both a negative and positive tendency towards lifelong learning (see Table 2). The item mean for Application of Knowledge was the highest at 0.87, followed by Goal Setting (item mean=0.538), Adaptable Learning Strategies (item mean=0.147), Self-Directed Learning (item mean=0.125), and lastly Locating Information (-0.16). Goal Setting, Adaptable Learning Strategies and Self-directed Learning item mean were low mainly due to having a negative item (see Table 2).

The first factor (eigenvalue = 3.812) accounted for 27.3% of the variance. There are four more subsequent factors that had eigenvalues more than 1.0 (eigenvalue = 2.152 for the second factor; eigenvalue = 1.514 for the third factor; eigenvalue 1.194 for the fourth factor; and eigenvalue = 1.085 for the fifth factor). The combination if these four other factors accounted for another 42.5% of the variance. Although these factors were not interpretable, the variances that these factors accounts for is substantial, and needs further exploration. The scree plot shows an indication of more than one factor, indicating that the translated lifelong learning questionnaire does not have adequate factor integrity (see Figure 1).

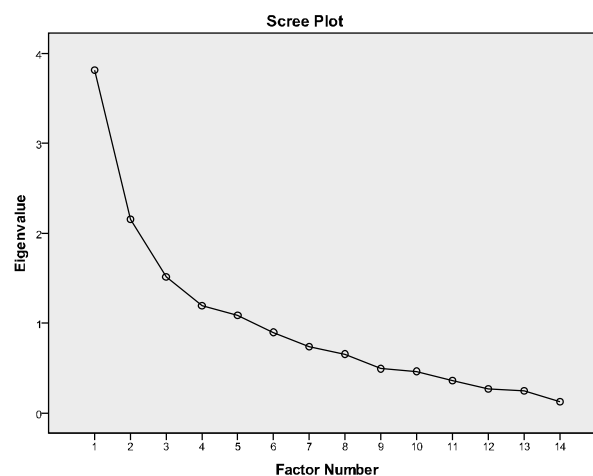


Figure 1 Scree plot for lifelong learning questionnaire

Male and female university students was found to have different lifelong learning tendency ($t = -2.11$, $df = 59$, $p = 0.039$), with female students showing a stronger tendency towards lifelong learning (Item mean=0.51, $SD = 0.36$) compared with male students (Item mean=0.29, $SD = 0.32$). No significant differences were found between students of different programs in this study.

4. Discussion and Conclusion

Our aim in this paper is to test the validity and reliability of the translated lifelong learning questionnaire developed by Kirby and colleges (2010). Although the 14-item questionnaire showed moderate internal reliability and good factorial integrity in its original format (Kirby et al., 2010), the same cannot be concluded in its translated version conducted among Malaysian university students. This may be due to the smaller sample size of this study (N=65) compared with Kirby et al., (2010) which have a sample of 304. Although there are over 120 registered third year students at the Faculty of Education, the small sample size was due to the fact that not all students attended the lecture that day, and not all students who attended the lecture stayed back to complete the questionnaire. Another possible reason would be that the wordings used in the translation were not suitable to the target population. Another factor that is worrying is that this study showed a significant difference between male and female students. Although this may suggest some hidden bias in the items (Kirby et al., 2010), it may also be due to the unequal number of male vs female in the study sample (24.6% vs 70.8%). Therefore, further exploration of gender difference is warranted with a larger and balanced sample.

In conclusion, based on the results of this study, the translated lifelong learning questionnaire is still in its early stages and is not ready for use in the Malaysian population. To improve the validity of the translation, Malaysian university students may be included for a focus group to select more suitable terms and wordings that are more meaningful to them, but still retain the original purpose of the questions. This would make sure the lifelong learning questions can really relate to the students.

Table 1. Age, gender and programme of sample

	Study Sample (N=64)	
	N	%
Age (mean(sd))	23.26 (1.52)	
Gender*		
Male	16	24.6
Female	46	70.8
Program of Study		
Science & Mathematics	12	18.5
Special Education	11	16.9
Sports & Recreation	7	10.8
Islamic Studies	35	53.8

* there are 3 missing data

Table 2. The relation between specific questions and lifelong learning characteristics

Item	Characteristics of lifelong learner (Cropley & Knapper, 2000)	Mean	SD
Goal setting			
Item 1:	I prefer to have others plan my learning	0.94	0.92
Item 6:	I seldom think about my own learning and how to improve it	0.70	0.74
Item 7:	I feel I am a self-directed learner	0.83	0.77
Item 9:	I love learning for its own sake	1.02	0.85
Item 14:	When I learn something new I try to focus on the details rather than on the 'big picture'	-0.80*	0.76
Application of knowledge and skills			
Item 5:	I am able to impose meaning upon what others see as disorder	0.36	0.86
Item 10:	I try to relate academic learning to practical issues	1.17	0.68
Item 12:	When I approach new material, I try to relate it to what I already know	1.08	0.74

Item	Characteristics of lifelong learner (Cropley & Knapper, 2000)	Mean	SD
Self-direction and evaluation			
Item 8:	I feel others are in a better position than I am to evaluate my success as a student	-0.80*	1.19
Item 13:	It is my responsibility to make sense of what I learn at school	1.05	0.74
Locating information			
Item 11:	I often find it difficult to locate information when I need it	-0.16*	0.98
Adaptable learning strategies			
Item 2:	I prefer problems which there is one answer	0.34	1.12
Item 3:	I can deal with the unexpected and solve problems as they arise	0.69	0.85
Item 4:	I feel uncomfortable under conditions of uncertainty	-0.59*	1.06

*failed to show a tendency towards lifelong learning

5. Acknowledgements

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